DIVE WITHOUT TANKS

POWERDIVE

Power Snorkel User's Manual

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FAILURE TO READ THE MANUAL COULD INCREASE THE RISK OF A PROBLEM OR INJURY AND DECREASE THE ENJOYMENT OF YOUR DIVING.

Without proper training and/or adherence to this manual's instructions, diving can be dangerous or even fatal.

INTRODUCTION

Thank you for purchasing a Powerdive Power Snorkel! The versatile unit is the ultimate bridge between the gap of snorkeling and scuba diving, yet it's in a league of its own! Whether you are exploring the coral-filled coastline, fishing for Lobster or cleaning the hull of your vessel, the Power Snorkel is the ideal means to go about your aquatic adventures.

The divers can remain submerged in shallow water for over an hour from one charge of the battery. Unencumbered by air tanks, gauges and the equipment associated with scuba diving, the unit is easy to operate for the whole family. Fresh air is supplied to the divers through the air hose attached to the regulator harness, pumped into the yellow air reservoir by a 12 volt compressor housed in the highly visible blue bucket.

The diver can effortlessly tow the floating air pump by the air supply hose, which is attached to the diver's harness and regulator. The air reservoir can also be used to provide surface floatation for the diver. Power Snorkel equipment is simple to set up and use and has many applications.

Certain features of the Power Snorkel afford an added element of safety to diving:

- The presence of the distinctive Power Snorkel unit on the surface gives a clear indication to other vessels of the location of the divers.

- The length of the air hose limits the maximum depth of dive.

- If the diver experiences any difficulty, a controlled ascent can be made.

- The air reservoir can be used by the diver, for surface floatation in the event of cramp, fatigue etc.

- In warmer waters, where wet suits are not required, only a minimal amount of weights will be needed. Some divers will not require any weights at all.

Powerdive has manufactured your unit to the highest of standards, which should provide you with years of reliable service. However, proper care of your Power Snorkel unit, especially in saltwater environments, is essential to ensure your unit remains in good working order. Follow the instructions outlined in the maintenance section carefully and periodically.

Please call Powerdive on (08) 9385 6500 if you require further information and tips regarding the maintenance and use of your Power Snorkel, or alternatively email info@powerdive.com.

POWER SNORKEL DESCRIPTION

The Power Snorkel is a battery powered surface air supply system for shallow water diving. The air pump and battery float on the surface in a plastic housing. Fresh air is pumped to the diver through a breathing-air hose.

Air from the pump passes into the external air reservoir, then through the hose to the demand regulator. The pressure relief valve located on the T-Piece, which is set to release surplus air at 23 PSI, maintains pressure in the reservoir. When the diver inhales, the demand valve opens and allows air to flow into the regulator. It is quite normal for air to vent from the pressure relief valve at the pump outlet, during use.

The power source for the Power Snorkel is a 30-35 Amp, 12 volt sealed marine gel battery, installed in the base of the pump housing. The location of the battery in the lower compartment of the housing helps maintain the Power Snorkel in an upright position, by establishing a low center of gravity.

The air pump is an oil-less diaphragm type compressor and will not contaminate the air supply.

To protect the system from dirt and sand, the air is filtered through a sponge filter located on top of the flag tube.

During operation, the pressure in the system varies depending on the depth of the diver. The pressure is always slightly in excess of the ambient pressure at the diver's depth. Fresh air is drawn in through the filter on the top of the flag and pumped continuously into the external air reservoir. The system is designed to operate at low pressure, in order to maximise battery duration and minimise weight.

The system pressure should not be adjusted in any way unless done by a qualified Powerdive technician, as this could adversely affect operation or damage the equipment. **In particular, no attempt should be made to increase the depth of operation.**

Achievable depths will vary from person to person, due to a wide range of variables including:

- **Health**
- **Age**
- **Fitness**
- **Exertion**
- **Weight/Size**
- **Experience**

TRAINING FOR OPERATION

Powerdive units are easy to use, although it is very important to understand the fundamentals of surface air supply diving and how it differs from scuba. Pressurised air is delivered to the diver from the surface. It is completely safe to breathe, provided you follow the safety points outlined in this manual and use the correct techniques whilst diving.

Firstly, when breathing pressurised air, if you are not constantly inhaling and exhaling, your lungs can expand due to an outside pressure drop when ascending, which could result in an air embolism or expansion injury. Hence:

NEVER HOLD YOUR BREATH WHILST DIVING (ESPECIALLY WHEN ASCENDING)

If you are not breathing in, you should be breathing out. Breathing technique is of utmost importance to scuba divers and users of Powerdive systems. A full scuba course will emphasise the correct breathing technique to be used; however it is not necessary to have completed a PADI or SSI Scuba course to use a Powerdive. We do strongly recommend learning some skills from either a qualified PADI or SSI instructor or from an experienced diver, for your benefit and comfort whilst using a Powerdive. Always take long and steady breaths in and out, this allows the pump to continue filling the air reservoir while you are using the supply of air.

Using these following techniques are highly recommended and you can learn them from an experienced diver or scuba instructor:

- Ear Equalising
- Correct use of weights to gain neutral buoyancy
- Mask Clearing
- Regulator Clearing
- Proper Ascent Rates & Techniques
- Diving with your buddy
- Selecting a dive site
- Weather and water conditions for safe diving
- How diving affects our bodies
- Correct use and maintenance of equipment

HEALTH & FITNESS

To experience Powerdiving, you do not have to be a first class athlete, although you should be confident in the water and a good swimmer. Maintaining a good fitness level is also important. Diving is not suitable for anyone who suffers from heart or respiratory problems. If you have any doubts about your fitness, consult a physician before diving.

Never dive with a cold or sinus congestion, as this interferes with equalising ear pressures. Discomfort and injury can result. Never dive whilst under the influence of medication, drugs or alcohol.

PREPARING FOR YOUR DIVE

Prior planning and preparation will help you avoid a wasted day or even injury. Before using the Power Snorkel, make sure all your equipment is in good condition and that you have all your gear. A checklist is the best way to achieve this.

Always maintain your dive gear, including masks, fins, boots, wetsuits, and inspect for damage to straps etc. Avoid wear and tear by washing your gear in fresh water after every dive.

Ensure your battery (including spare) is fully charged. Battery charge level gauges are available from many marine or auto stores. Your 240 Volt Charger should also have a "Fully Charged" indicator light.

Visually inspect the Power Snorkel, looking for corrosion, damaged wires and air hoses. Pay particular attention to switches and electrical components. Turn your Power Snorkel on, to check proper operation. Run for 30 seconds to ensure it will not fault while you are in the water. Remove the lid of the housing and visually inspect the interior, looking for loose or damaged wires, connections or corrosion.

Always advise a responsible person, where and how you will be diving and when you expect to return.

SETTING UP THE POWER SNORKEL

Do not rush the preparation of your Power Snorkel, as you may miss an important step and risk the safety and enjoyment of your dive. Setting up your Power Snorkel is a simple process, however follow each step carefully.

Small sand particles will affect the operation and longevity of the pump and hose couplings. Ensure no sand enters the pump housing or hoses during set up, disassembly or storage.

Set the Power Snorkel lid on the ground, deck or stable surface. Connect the battery cable to the pump, and screw the dive flag into the air intake on top of the lid. This is very important as the flag acts as a snorkel and as a dust filter. Lay the empty bucket upside down on the ground to allow for inflation of the ring. Inflate the floatation ring before inserting the battery.

Attach the 1m Hose A to the female connection on top of the lid and the other end to the air reservoir. Lock quick-connection couplings. Attach Hose B to the other end of reservoir. Use this hose to inflate the floatation ring. A short yellow inflation hose will be attached to the rubber tyre tube beneath the white skirt.

Switch the unit on and hold the male hose plug against the tyre inflation tube until the tube is plump and the creases are gone from the white skirt. Push the tyre tube down as you are inflating it to make sure there is a large amount of the base of the blue bucket showing. This ensures that when the battery is strapped in and the Power Snorkel is in the water, it has a low centre of gravity. Once fully inflated, push the bung plug into the yellow tube and tuck it back inside the white skirt.

Now right the bucket, place the battery in the battery tray, which should be in the base of the bucket and secure the black Velcro straps over the top of it. To make fitting the pump/lid easy, simply disconnect the 1m hose to allow for the lid to be screwed down to the bucket. Reconnect the hose to the unit, along with the rest of the hose configuration.

SET-UP FOR SINGLE DIVER OPERATION

Connect the 1m hose to unit and reservoir, then connect the Y-Piece on the other end of the reservoir. Connect a 6m hose to one socket of the Y-Piece, leaving the other side empty (no air will escape female sockets when there is no male connected). Connect a second 6m hose to the existing one, this allows the single diver to reach the 12m depth limit. Connect the hose to the regulator.

SET-UP FOR TWO-DIVER OPERATION

Connect the 1m hose to the unit and reservoir, then connect a 6m hose to the other end of the reservoir. Connect the 6m hose to the single end of the Y-piece, and the two remaining 6m hoses to each side of the Y-piece. Connect hoses to the regulators.

To maximise air efficiency for two divers, both divers should dive at approximately the same depth.

When connecting all hoses, inspect and clean the quick–connect hose coupling, then insert until a 'snap' is heard. Try pulling hoses apart firmly, to ensure they are locked. Secure quick-connection by turning the blue locking ring until you feel some friction.

This is very important, as a bad connection could separate during the dive. It is imperative, after every dive, that connections be washed in fresh water and inspected for sand contamination. Sand will damage your fittings. When washing down hoses, ensure you connect a male fitting into a female, as water can enter the hose and become stale in storage.

To ensure the exhaust valve is free on your regulator, try blowing into mouthpiece - there should be no resistance.

Run the pump. The reservoir should pressurise fully in approximately ten seconds, after which, air will be heard flowing through the over pressure relief valve. Press the purge button on your regulator to allow old air to be purged from the system. It may have an odour from being in storage.

Allow the system to re-pressurise, then take several deep breaths from the regulator to ensure proper operation on both exhalation and inhalation.

The Power Snorkel is now ready to use.

USING THE POWER SNORKEL

The following information will help you understand the different techniques needed for Powerdiving, as apposed to scuba diving. Some of these differences are apparent. Some are not so obvious.

Water Entry

Always think about where and how you intend to enter the water, well in advance. Easy entries can be made from gradually sloping beaches, stable docks or off the transom of your boat. Avoid areas with high surf, strong currents etc.

We do not recommend using the Power Snorkel if there is any possibility of the unit being tipped over in surf or the air intake being submerged. The one-year warranty does not cover you if the unit is flooded. If you have to swim through small surf to reach the dive site, you should swim whilst holding the compressor housing in front of you, to stabilise it. Do not allow waves to break over the unit, or for it to tumble. Make sure you leave the unit switched off until you reach your dive site.

Always keep in mind that the compressor housing stays on the surface and may be up to 13m (40 feet) away from you. Look around for any obstacles that could impede the free movement of the compressor housing or affect the operation of the system.

Extreme care must be taken when diving near obstacles (i.e. jetties, wrecks, moorings, other vessels etc.) or in currents. Avoid diving in areas where control of the surface unit and supply hose cannot be easily achieved.

If you are in an area of heavy boat traffic, make sure the pump will not float into the path of other moving boats or move into a location adjacent to a boat's exhaust outlet. If you must have the pump in the water in the proximity of other boats, ensure that there is a responsible person on the surface to watch and control the location of the pump.

WARNING! Do not operate the unit anywhere near exhaust fumes! THIS CAN BE FATAL!

Setting your weights correctly is more important than on scuba, since you will not have a buoyancy compensator. You will need the correct amount of weight to achieve neutral buoyancy, so you don't have to fight to stay up or down.

Set your weights so that when you breathe in, you ascend slowly and when you exhale you sink slowly.

Before entering the water start the pump and place it in the water. Detangle the hoses and undo any loops, knots or twists. Feed the hose into the water, ensuring no tangles, until you come to the regulator. Attach the regulator harness (to yourself) and enter the water with the regulator in your mouth.

Ensure the hose and regulator will not catch on to anything when you enter the water. Do not bite hard onto the regulator mouthpiece, as this is not necessary to safely hold the regulator in your mouth.

Breathe slowly, using long deep breaths as mentioned earlier. Do not breathe quickly and shallowly. Do not draw hard on the regulator, as this will not increase airflow. Try counting 1, 2, 3, 4, whilst breathing in, then the same breathing out. This will ensure you exhale all "used" air from your lungs.

MAKE SURE YOU ARE RELAXED AND BREATHING NORMALLY BEFORE DESCENDING.

Descend slowly, equalising early and often. If your ears already hurt, it is too late, so ascend slightly and try again. When successful, continue to descend, equalising your ears and relieving mask squeezes all the way down.

Look up frequently to see if your hoses and reservoir are clear of obstacles and entanglement, keeping in mind the compressor unit is on the surface.

Diving using your Power Snorkel unit is safe and reliable, but remember, you are dependant on air being supplied from the surface so in the unlikely event of a system failure, ensure you are always in a position to safely ascend to the surface, exhaling all the way to the top.

You should never ascend faster than the recommended ascent rate outlined in your dive course. A good rule of thumb is 'no faster than your slowest bubbles'. Always ensure a direct ascent route to the surface in case of problems or system failure.

Kinks in the airline may temporarily stop airflow. If you have tension on the hose and you experience a sudden loss of air pressure, the air will usually flow again immediately you take the tension off the hose by moving backwards towards the air hose. If this is not the case, begin your ascent and determine the cause once you are on the surface.

If the airflow gradually reduces, this means the battery is getting low. End your dive and ascend. DO NOT RUN THE BATTERY COMPLETELY FLAT. Doing this will increase the current passing through the motor and will burn out the brushes. This is not covered by warranty.

It should not be necessary to use the regulator purge valve under water and is better not to do so. Operating the purge valve will relieve most of the pressure in the reservoir and you will have to wait a few seconds before you can inhale easily. If you have just exhaled a few seconds may seem like a long time.

Breathing on your Powerdive regulator should be effortless, as it is a demand regulator and means just that. As you descend past approximately 4 metres for 2 divers and 8-9m for one diver, it will start getting harder to draw on the regulator –

this is normal. Take long deep breaths, rather than trying to suck harder. When you inhale you should receive more than enough air, if this is not the case then:

a. *Battery is getting flat*
b. *You are too deep*
c. *You are over-exerting*
d. *The hoses are kinked*
e. *There may be a leak in the system*
f. *You are breathing too shallow – take long deep breaths*

NEVER CONTINUE TO DIVE IF YOUR BREATHING IS RESTRICTED OR UNCOMFORTABLE. Ascend to a shallower depth and try again. If breathing is still restricted, end the dive and surface.

The Power Snorkel unit will last approximately one hour on a fully charged battery. The unit will deliver less air when the battery charge is depleted. As soon as you feel your breathing is restricted you should begin your ascent. **NEVER try to prolong your dive by sucking harder on the regulator, as you can damage your lungs.** As you ascend, you may feel that breathing becomes easier and the battery may not be flat. This is not the case. The airflow has just become easier because you are not so deep**.**

Always swim against the current at first and drift back, so you will have enough energy to swim back to the boat or shore.

Keep the regulator in your mouth until you are out of the water to avoid inhaling water. *Always keep the regulator in your mouth whilst in the water.*

Exiting the water at a beach should be straight forward, but don't allow the pump housing to be tumbled in the surf. Turn off the pump and steady it once you are in shallow water. Carry it onto the beach, being careful not to trip over the hose.

Climbing back aboard a boat or dock can be more difficult, but is still easier than with scuba tanks. Hold onto the regulator while you climb aboard and then haul the compressor up after you, lifting only by the handles on the lid, or on the skirt. Never lift the unit by the hose.

RUNNING THE POWER SNORKEL ON DECK

This set up is ideal for hull cleaning or emergencies such as de-tangling a propeller.

The Power Snorkel can be used on the deck or in the water. The Deck Snorkel and Double Deck Snorkel are intended specifically for use on the deck or dock, using the 12-volt power supply from the boat.

The Power Snorkel can use its supplied battery or can be connected to the boat battery, using a 5m running cable, purchased from a licensed Powerdive dealer.

Unscrew the lid assembly from the bucket and place the pump on the Deck. This allows proper cooling of the unit. *Never use the Power Snorkel in its bucket out of the water, as it will overheat.* Select the most suitable location on the deck or dock for setting up the pump to get the maximum benefit from the hose length and where

the cables can reach the power source. Make sure the pump will not draw in engine exhaust or other contaminated air. *Failure to do so can be harmful or even fatal.*

Securely tie the handle on the pump housing to an adjacent structure so that it cannot be pulled into the water.

Make sure the compressor is switched off and connect the cables to the 12-volt power source on the boat or dock with the correct polarity (Red = Positive, Black = Negative).

Run the compressor for a few seconds to test.

Continue with the set up and test of the equipment as explained in section 7. Make sure the air reservoir is either on the deck or fully floating in the water. If it is allowed to hang over the side, the weight of the reservoir may cause the hose to kink. RECOMMENDATION: A handy change to the configuration is placing one of the 6m hoses in between the pump and the reservoir, to allow the reservoir to reach the water. Leave the 1m hose out of the set-up. Connect the rest of the hoses as explained in the instructions above.

In order to run the Power Snorkel from the boat battery, it is necessary to connect extension cables to the plug usually used for the internal battery. The unit should be run separate from the floatation device. Ensure the freestanding pump unit is secured well, so it cannot be pulled overboard.

Also check that the routing of the extension cable is not going to create a tripping hazard.

The current draw of the Power Snorkel at maximum depth is significant so take care not to drain the boat battery. If possible, isolate the battery being used to run the Power Snorkel from all other batteries aboard.

DISASSEMBLY OF YOUR POWER SNORKEL

As with assembly, always ensure hose connections and air intake assembly are clean when packing away the equipment. Always replace the blue air inlet plug, when the snorkel is not fitted, otherwise water and dirt can enter the pump intake.

Soon after the dive, the Power Snorkel should be washed down with fresh water externally and the regulators rinsed out. Wash down is necessary even if the Power Snorkel is used in a swimming pool, as chlorinated pool water can be very corrosive.

Do not allow water to enter the reservoir or hoses, as it can become stale and leave residue in storage. To avoid this, connect all the male fittings to the female fittings.

Disconnect the hose at the pump housing and at the regulator and coil up the hose. Remove the lid of the compressor housing and unscrew the flag from the air intake. Replace blue intake plug. Invert bucket while lid is unscrewed and deflate the tyre tube for storage if you wish.

STORAGE TIPS

On returning from the dive, the Power Snorkel should be allowed to dry out. Keep the system in a dry location with the lid off until there are no signs of condensation inside. Once completely dry, only apply Lanolin spray to any exposed metal showing signs of corrosion. Do not use CRC or INOX anywhere on any Powerdive unit as it can heat up and excrete toxic fumes.

It is preferable to store the hose in the largest diameter coil possible. This will reduce the tendency for the hose to coil up when in use. Be careful not to store the hose with a kink in it or permanent creasing may result.

Remove and recharge the battery immediately after use and store fully charged. **Do not charge the battery inside the unit.** Cyclical batteries can be left on trickle charge when not in use, similar to car batteries.

If the Power Snorkel is stored in an enclosed area, make sure it is dry first. **Always wash regulators thoroughly as they have metal components inside. Failure to do so will result in corrosion and/or mildew.**

Run your Power Snorkel for 5 to 10 minutes every few months to check operation, especially during the winter months when you're less likely to be diving. Sometimes if a Powerdive has been laying dormant for a length of time, the carbon brushes in the electric motor can cease in their housing. Running the unit every couple of months helps to avoid this problem occurring.

BATTERY CHARGING AND CARE

The Power Snorkel uses a 30-35aH, 12-volt marine gel sealed battery. The battery is built to the highest standards and with proper charging and care will give several years of use.

The battery is installed in the lower chamber of the pump housing and is accessed by unscrewing the lid and motor assembly.

The Power Snorkel unit can be charged from most 12 volt charging systems but automatic chargers are the only suitable types, as these will not over charge the battery. Non-automatic charges can also be used with care, and must be disconnected once the battery is fully charged. Note: with the sealed battery, it is very important to avoid over-charging, as the electrolyte cannot be replaced as with conventional batteries. A prolonged charge at more than 13.8 volts will eventually ruin the battery. Both trickle and high current charging are possible.

A 10-20 amp Charger is ideal and a high amperage charge is best to gain maximum battery life. When using a 240V charger, connect the alligator clips directly to the battery terminals (red = positive, black = negative). When the battery is fully charged, unplug the charger and disconnect the lead.

The Power Snorkel battery is the maintenance-free type and requires no replenishment of electrolyte. With proper charging, the battery will last for many charging cycles. Eventually, the battery will not hold sufficient charge and should be replaced with a battery from a certified Powerdive dealer.

MAINTENANCE AND SERVICING

With proper care, your Power Snorkel unit will provide years of safe and enjoyable diving. After each dive, inspect and maintain your unit to ensure its reliability and longevity.

Monthly inspection of the equipment is recommended for normal use. For heavy use, such as a rental situation, more frequent servicing is required. Powerdive will be able to inform you of particular operating conditions and make servicing recommendations.

Check all your other dive gear for damage and deterioration.

Connect the hose and regulator to the pump outlet and run the unit. Once the reservoir is fully pressurised, check that the air is flowing from the pressure relief valve at the air outlet T-Piece on the unit.

Depress regulator purge button (located on the front cover) and ensure airflow is present. If water is available submerge the reservoir, hose and regulator and check for air leaks.

Unscrew the lid of the compressor housing and inspect the equipment inside. Look for loose bolts and electrical connections, corrosion or other signs of deterioration.

Powerdive recommends all major servicing be completed at Powerdive Australia, or under instruction by one of our trained servicing technicians.

IF YOU HAVE ANY QUESTIONS ABOUT SERVICING, DON'T HESITATE TO CONTACT POWERDIVE AUSTRALIA ON +618 9385 6500 OR EMAIL *info@powerdive.com*.
PLEASE DO NOT ATTEMPT TO FIX THE UNIT YOURSELF WITHOUT PRIOR APPROVAL FROM ONE OF OUR TECHNICIANS.

PURCHASE CONDITIONS

Powerdive Pty Ltd desires owners of its' products to be completely satisfied with their purchase. Each unit is inspected and tested prior to shipment and, with proper care and maintenance, will give many years of efficient operation. Any defect in the equipment due to faulty materials or workmanship occurring within twelve months of purchase will be repaired or replaced free of charge.

Your rights, as purchaser, against Powerdive Pty Ltd under this warranty are limited to the repair and replacement of any defective components, Powerdive's maximum liability under this warranty will not exceed the original purchase price of the defective unit, and Powerdive reserves the right at its sole discretion, to refund the purchase price in lieu of repair or replacement.

Damage or deterioration to the product due to accident, misuse, neglect or abuse, and normal wear and tear is not covered by the warranty. Failure to comply will invalidate warranty. It is recommended that all repairs and servicing of your Powerdive unit be carried out by an authorised technician of Powerdive Pty Ltd. Any modification of the Powerdive units will automatically invalidate this warranty.

Shipping charges relating to warranty claims shall be at the expense of the purchaser unless otherwise agreed in writing with Powerdive Pty Ltd.

It is not intended by these conditions to limit or exclude any liability, which is not capable of being limited or excluded by consumer law.

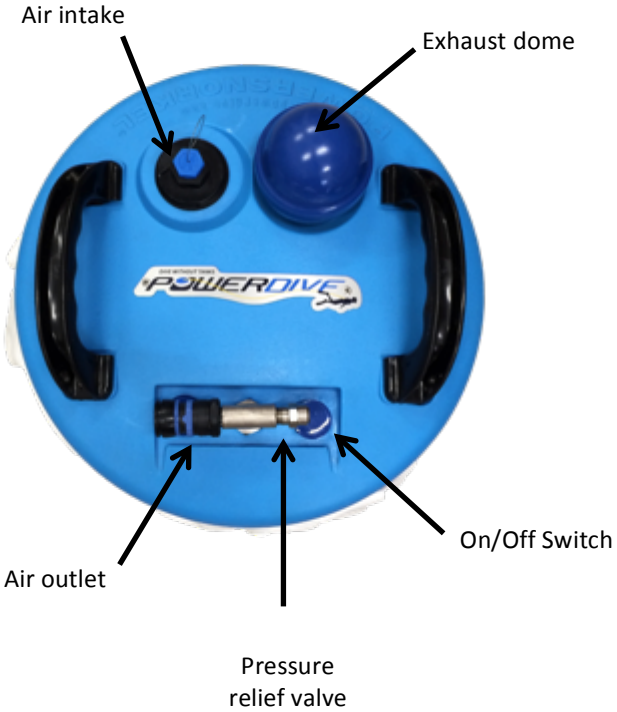
IMPORTANT NOTICE – WAIVER OF LEGAL LIABILITY

1. *I am aware that diving and the use of the equipment associated with it including the Powerdive system is dangerous and involves a risk of serious injury.*
2. *I will be engaging in diving entirely and absolutely at my own risk.*
3. *I will not make any claim against Powerdive Pty Ltd, its directors, servants and agents, arising out of my diving, in respect of any loss or any injury sustained by me however caused, whether or not it arises from the negligence of Powerdive Pty Ltd, its directors, servants or agents.*
4. *I indemnify Powerdive Pty Ltd and its directors, servants and agents from any claim, which may be made against them by any person arising out of my purchase and/or use of the Powerdive system (including without limitation, claims by any persons I may permit to use the system).*
5. *I warrant that the Powerdive system will not be used in any "workplace" (as that term is defined in any Federal or State legislation from time to time pertaining to workplace health and safety) nor for any "occupational diving" as that term is defined in Australian Standard 2299 (or any equivalent or replacement of that standard which may be in force from time to time) UNLESS I/ We/ Our Company fully comply to all local work health & safety regulations and requirements.*
6. *I acknowledge and agree that any terms relating to merchantable quality or fitness for purpose, which would have otherwise been implied into my contract for the purchase of the Powerdive system by any statute, are, to the extent permitted by law, excluded.*
7. *It has been recommended to me that I obtain my own accident insurance to cover me whilst diving.*
8. *I acknowledge that it is not intended by this waiver to modify or exclude any liability, which is not capable of being excluded by law.*
9. *By purchasing this unit, I agree with the purchase conditions laid out in this Owner's Manual.*

STEP-BY-STEP ASSEMBLEY INSTRUCTIONS

Standard Components:

1. Power Snorkel
2. Air Reservoir
3. 3 x 6m Hose
4. 1m Hose
5. 2 x Regulator
6. Y-Piece
7. Flag and Pole
8. 12V Battery
9. Gear Bag



Step 1 – Unpack unit and charge battery

Unpack the Power Snorkel and all of its components from its box or bag and check you have received all the correct items from the checklist. If the bucket is wrapped in plastic, unwrap it and discard the packaging. The first thing to do is ensure the battery has been fully charged, as they generally will be shipped in a discharged state.

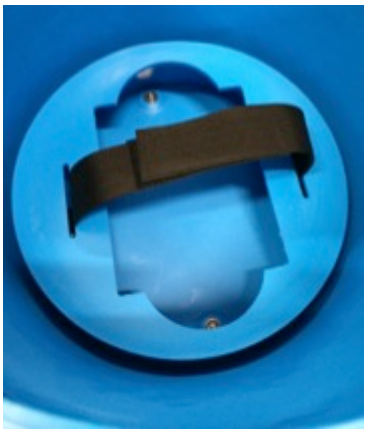
Step 2 – Inflate flotation ring and fit battery

1. Unscrew the lid of the Power Snorkel and place it on the ground next to the bucket. Remove the blue dust cap from the intake and screw in the flag and pole. Connect the grey battery plugs together.

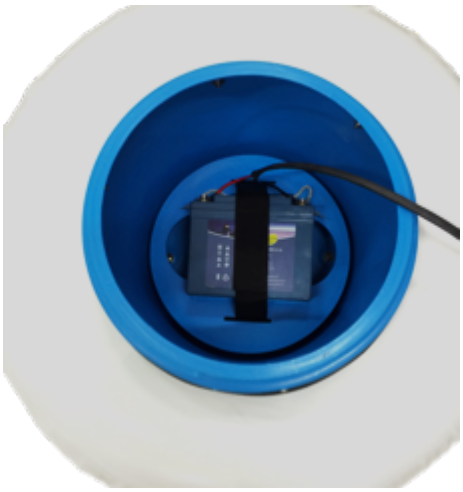
2. Connect the 1m hose, the air reservoir and a 6m hose to the outlet on the lid. Now tip the bucket upside down and expose the yellow inflator hose which is located inside the white skirt.

3. Switch the unit on and hold the male hose fitting over the inflator hose until the tyre tube is firmly inflated. Push the tyre tube down as this will allow the blue bucket to sit low in the water for cooling and stability purposes.

4. Put the plug in firmly, and tuck the inflator hose inside the skirt. Ensure the white skirt is tight with relatively no creases. The battery should look as it does in the picture below, with the black straps through the slots and the tray sitting upright so it can support the battery.



5. Place battery in the bucket so the terminals are facing up. Fix the Velcro straps together over the top of the battery. Connect the battery lead to the pump lid and screw down firmly (It is easiest to quickly disconnect the hoses from the lid before screwing it down). Do not try to over-tighten the lid.



Step 3 – Connecting the hoses and regulators

1. Connect the 1m hose, reservoir and 6m hose to the lid again.

2. Connect Y-Piece to 6m hose.

2. Connect the remaining 6m hoses to Y-Piece

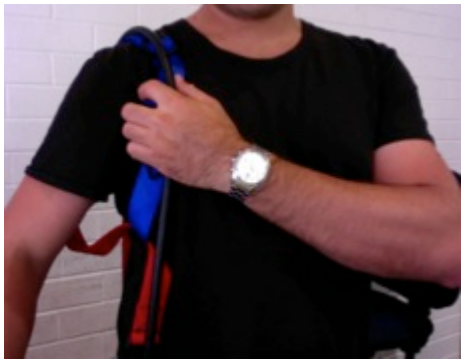
4. Connect the 6m hoses to each regulator.

5. IMPORTANT! Make sure each female fitting is locked off using the locking ring to avoid the hoses uncoupling whilst you are diving.

Unlocked

Locked

Step 4 – Putting on the regulator harness



1. Hold the black hose and blue strap in your left hand then slip your right arm through the harness so the strap and hose are on your right shoulder.

2. Fasten the red strap's buckle around your chest and adjust to size so that the harness is firm but not overly tight. When the regulator is in your mouth, the PowerDive logo should be upright and the black hose coming from over the right shoulder.

3. Switch unit on before you enter the water, wait for it to pump up to pressure and then test the regulators. Breathing air should be effortless and steady. Now prepare to launch the Power Snorkel into the water.

SETTING UP FOR SINGLE-DIVER OPERATION

Step 1 – Set up Power Snorkel as per instructions up to Steps 1 and 2

Step 2 – Attach Y-Piece to Reservoir

Note: This is a necessity, as the female fitting on the Y-Piece is needed to plug in the 6m hose.

Step 3 – Connect both 6m hoses in sequence

Note: The female sockets do not release air when not in use.

Connect one of the regulators to the second 6m hose, don the regulator harness like normal then switch the Power Snorkel on. Wait for the unit to pump up to pressure before entering the water. Warning: If you plan to dive solo, please remember to let a friend or family member know where you will be diving and for how long. Keep in mind a fully charged Power Snorkel battery has a recommended run time of approximately one hour.

RUNNING THE POWER SNORKEL FROM AN ALTERNATIVE POWER SOURCE

Sometimes, you may wish to run the Power Snorkel unit from the deck of a boat or the dock. Generally people will do this if they simply need to dive over the side of the boat to clean the hull, free a rope from a propeller or other emergencies.

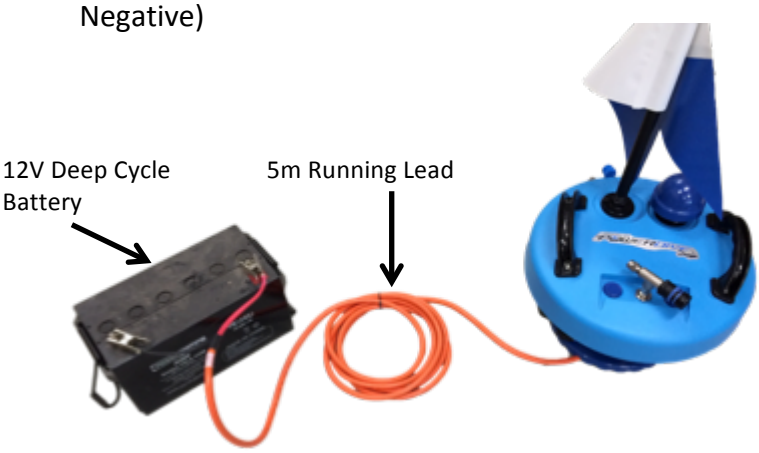
Options include:

- Your boat's house batteries (by using our optional 5m running lead)
- Any 12 Volt deep cycle battery (above 30 a/h recommended) (by using our optional 5m running lead or an extra Anderson lead)
- A 240V power inverter
- The supplied 35 amp battery

Warning: If you opt to use the Power Snorkel in this manner, you must:

- Have the lid of the unit unscrewed and separate from the bucket to avoid overheating
- Set the unit aside in a dry area
- Securely tether the unit to the boat or dock to prevent it from being pulled into the water while you are diving

Using one of our optional 5m running leads, attach the grey Anderson Plugs together, and the alligator clips onto the battery terminals (Red = Positive, Black = Negative)



a. Single diver set up

Step 1 – Connect the Power Snorkel to battery lead.

Step 2 – Refer to figure a. Connect a 6m hose to the female outlet, then to the reservoir (this allows you to have the reservoir floating on the surface to use as a floatation device if necessary.) Then proceed by connecting the Y-Piece to the reservoir, then 2 x 6m hoses in sequence. Connect the regulator and fasten the harness to yourself.

Step 2a - Refer to figure b. Connect a 6m hose to the female outlet, then to the reservoir (this allows you to have the reservoir floating on the surface to use as a floatation device if necessary.) Then proceed by connecting the Y-Piece to the reservoir, then 2 x 6m hoses into the Y-Piece. Connect the regulators and fasten the harness to yourself and your fellow diver.

Step 3 – Switch the unit on and allow it to pump up to pressure before entering the water.

Note: You cannot allow the battery to run flat, as this will damage the motor, so take note of the amperage of the battery you are using, and remember the Power Snorkel draws 24 amps/hour to allow you a safe dive time.

b. Double diver set up

We hope you enjoy your Powerdive Power Snorkel, and if you have any further questions, please contact us using the details provided.

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